

Journal of The American Institute of ARCHITECTS



INIGO JONES

August, 1947

What Does the Homebuilder Want?

A Reporter's View of Courtrooms

Building a Satellite City

Five Publications on Hospitals

The Architect and the Hospital Program

Walter R. B. Willcox, F.A.I.A.—1869-1947

Contemporary Architect & His Education—II

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What Does the Homebuilder Want?

RESULTS OF A MAGAZINE SURVEY OF SOME 12,000 FAMILIES INTENDING TO BUILD

WHAT THE CLIENT WANTS is primarily a matter between client and architect, with each case a question of individual needs and desires. Thus, questionnaires as to what homebuilders want, in the aggregate, are an academic matter, without individual significance. It is interesting, however, to note mass preferences, as indicating broad trends of taste and need, even though these may run counter to the individual practitioner's experience.

The editors of *Better Homes and Gardens* recently made a detailed survey of almost 12,000 families reported as definitely planning to build houses for themselves. The questionnaire used was a formidable document—16 pages requesting answers to approximately 100 questions. It is rather surprising that 43% of the families were undaunted enough to reply in voluminous detail. A special report from the research division of the magazine, 48 pages, 9" x 12", filled with summaries, graphs and detailed analyses, is well worth the archi-

tect's study. From this report we lift certain of the findings that reflect the general trend of the prospective homebuilders' ideas in the moderate-cost brackets:

"The desire to abandon the cities for the less crowded suburbs and open country is strong. The greatest exodus will be from the larger cities—those with a population of one-half million. This trend is more pronounced in the regions of densest population—the Middle Atlantic States.

"But this movement is not limited to any one group. Both the young and the old will make this change. The younger families will settle in the suburbs—the older families in the open country.

"It should be noted that these families are *definitely* going to move—55% of them already have bought the building site.

"Families planning to build in cities of one-half million population realize they cannot have large sites. Their lots will be somewhat larger than they now have—an average increase of about 23%.

One-fourth of all new homes will have a frontage of 75 feet or less. A few (4%) will have less than 50 feet. The majority of homes with narrow frontages will be located in the large cities. Homes of all prices, though, will be built in the suburbs and open country. Those building in the country will own, on the average, more than an acre—those building in the suburbs will have two and one-half times as much as they now own. They'll move to neighborhoods consisting of *new homes*.

"With a clear picture of the sites on which families will build, let's examine the type of home they will build—the style of architecture. Cape Cod is not only the most popular style (33% voting for Cape Cod), but it received the greatest increase in popularity over styles used in existing prewar homes. The Ranch House and Contemporary also have experienced a decided increase in popularity.

"Though Cape Cod stands far out in front, it is decidedly less popular among those planning more expensive homes. The . . . Ranch House is preferred by families building homes costing \$10,000 or over, and the Georgian style also

leads Cape Cod in homes valued at \$15,000 or more. The English and Southern Colonial are two other styles having a large following by builders of high-priced homes.

"The prewar homes of almost half of these families were two-story houses, but only one out of every four homes they will build will have a second story. This is undoubtedly traceable to the increase in popularity of both ranch house and contemporary styles of architecture. In the geographical regions in which these two architectural styles are popular, the Western States, the one-story house is preferred.

"However, 49% of the homes that will cost \$15,000 or more will have a second story.

"There will be but little change in the percent of homes with attics, though 60% of the families reported a desire for either a finished or unfinished attic as compared with the 66% who now have one. A similar decrease was reported in homes without attics. Those who have not yet decided represent 14% of all families.

"Finished attics will increase in number and be a definite, useful part of the homes. Of these, 60% will be used as a bedroom, 25% as

a hobby or recreation room and 27% as various other rooms. In low-cost homes attics will be used for sleeping.

"The percentage of families planning homes with basements remains the same as in the prewar period. If there is a change in the future it will be towards fewer basementless houses, as 19% reported they now lived in basementless homes while only 13% said they would build one.

"As might be expected, fewer basements exist and fewer will be built in the Pacific and West South Central States than in the North and the East. But in all geographical regions in which, before the war, less than three-fourths of these families had basements, the percentage with basements will increase. At the same time, in all regions in which more than three-fourths have them, the percentage with basements will decrease. Those who have basementless homes see a need for a basement. Those with basements are going to give basementless homes a try.

"These basements will be used. Though there is an increase in the number that will have a laundry or utility room on the first floor, still 74% of the homes with basements will have such a room in the

basement. Among these future homes there will be three with the laundry or utility room in the basement, for every two that have such a room on the first floor.

"The same is true for the hobby or recreation room—62% of the homes with basements will have such a room in that basement. Out of every four future homes that will have a hobby room, three will be in the basement.

"The average prewar home in which these families lived had 5.7 rooms—a living-room, a dining-room, a kitchen and two bedrooms. A few had a third bedroom or a recreation room or study. But the average-size home that they will build will have 6.4 rooms. This is in spite of the decrease in number of separate dining-rooms, which means there will be more bedrooms and many more hobby rooms, dens, studies, in these future homes.

"Before the war 74% of these families had a separate dining-room—one that was not combined with either the living-room or the kitchen. This will decrease to 65% in the homes they plan to build, with the combination living-dining room accounting for the greater part of this change. But still the majority of families, 65%, want a separate dining-room.

"The combination reaches the peak of its popularity in the Pacific, North Central and Mountain States. Likewise it is preferred by more old than young families.

"There will be more separate dining-rooms or fewer combinations in the more expensive homes. However, in each value group there's a decrease in the number of families wanting a separate dining-room.

"There is a definite trend toward kitchens with eating facilities and specifically toward kitchens with built-in tables or nooks. The percentage of kitchens with detached breakfast tables declines. Built-ins are very popular with the younger families.

"A kitchen-dining room combination will be found in only 7% of all the new homes. This, however, is an increase from 5% before the war. The kitchen-dining room combination is desired by 13% of the families building \$5,000 homes, but by only 3% of the families in homes costing \$15,000 or over. It is likewise popular with the older families.

"There will be more studies and dens, more hobby and recreation rooms, more first-floor laundries and utility rooms, and more first-

floor lavatories in the new homes. The great increase in these rooms accounts for much of the over-all increase in size of the homes from an average of 5.7 rooms to 6.4.

"The study or den reaches a peak of popularity in the South Atlantic States and among the younger families—the families with children. The hobby or recreation room follows a similar pattern and is in great demand in large cities.

"There will be more laundry, utility or work rooms on the Pacific Coast and in the West South Central States. The first-floor lavatory is desired by more families living in the New England, Middle Atlantic, and East North Central regions. This lavatory is a 'must' for many families in the middle-age groups and those families with children.

"Three-fourths of the new homes will have porches that can be used for lounging; one out of five will have a porch with eating facilities; and one-tenth of the new homes will have a sleeping-porch. In all cases there is a definite increase in the number of homes with porches. The cost of the homes results in but little differences in the demands for porches.

"The porch that is to be used for relaxation or lounging is most

popular in the South Atlantic and South Central States. The porch with eating facilities is being included in the plans of many families living in New England and the East North Central regions. The sleeping-porch is desired by builders in the West South Central States.

"Three out of every five homes to be built by these families will have three or more bedrooms, while before the war nearly half of them had two or less. Thus the average future home will have 2.7 bedrooms as compared with 2.5 for the prewar.

"Logically, younger families, families with children, will have more bedrooms than other families. We also find a greater number of bedrooms in each of the more expensive homes.

"One-third of these new homes will have two or more complete bathrooms. Before the war only 13% of these families had more than one. This means that the average number of complete bathrooms per home will increase from 1.2 to 1.3.

"These figures include only complete bathrooms. Many homes will have, in addition to the complete bathrooms, half-baths or powder rooms. One out of ten had such a

room before the war as compared with one out of every two future homes. By adding these half-baths to the complete bathrooms, the total number of bathrooms per home will increase from 1.3 to 1.8.

"In the future homes costing \$5,000 or less, the builders report an average of only 1.1 complete bathrooms (not counting half-baths). But in the homes valued at \$15,000 or more the builders responding will have an average of 2.2. Three-fourths of the homes valued at more than \$10,000 will have two or more.

"Before the war, one out of eight homes in which these families lived had no garage. But less than one in ninety of the homes they will build will be without one.

"The garage is definitely becoming a part of the house. Four out of ten families want their future garage as a part of their home—three others want it attached to the home by a porch or breezeway.

"Roughly, out of every ten garages, six will face the street; three will face the side of the lot; and one will face the back.

"Two-thirds of all families have heard of and plan to use a storage wall of cupboards and closets in their new homes. Only 7.3% are

uncertain. More than half of them want a large picture-window and a family hobby-recreation room with space for equipment. A living-room extending into an outdoor terrace is included in the plans of about one-third.

"In the living-room, dining-room, and in the bedrooms, Modern furniture will be used. It is in much greater demand among builders of low-cost homes than among those who will build homes of medium value. In the homes costing over \$15,000 Eighteenth-century furniture is preferred. At the same time Modern is more popular among young families.

"Decided geographic differences exist. In the Pacific Coast and

Mountain States, Modern leads all other styles, but in the South Atlantic and West South Central regions the desire for Eighteenth-century is strong.

"Only in New England is there any demand for Early-American, and even there it ranks third in popularity to Modern and Eighteenth-century.

"Nearly three-fourths of all these families want built-in bookcases or shelves in their future homes, half want built-in wardrobes and china closets, and about a third want a built-in breakfast table. To meet the desires of the majority of builders, dining-room tables, beds and bunks, desks, and chests or dressers should be detached."

A Reporter's View of Courtrooms

Reprinted from a bulletin of The Iowa Shorthand Reporters Association at the suggestion of the National Shorthand Reporters Association

IT IS OBVIOUS that most courtrooms are planned and constructed without the suggestions of a court reporter. Those in which the arrangements are satisfactory are few and others are so quite by accident.

The favorite position of this reporter is one between judge and witness (an ear for each), facing

counsel. Such position offers the reporter the best possible opportunity of performing his exacting duties with care. This arrangement, however, is the exception.

Many courtrooms place the reporter at the far side, with the witness between him and the court. When a witness is told to "tell the judge just how it happened," he

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does so with his utmost secrecy and the reporter's utmost despair. A witness occupying the outer position must "talk through" the reporter to reach the ears of the court, giving the reporter a favored spot in the line-up. The court, if unable to hear the witness, will ask the reporter to read it anyway; if not, it is much more appropriate for him, rather than the reporter, to ask the witness to speak louder or repeat.

One of our courtrooms of late vintage made provision for the reporter quite by surprise. The rostrum and the witness box are contiguous, hewn of the same wood, carefully and beautifully stained and polished, and elevated to proper poise and dignity. The reporter, however, sits at a table of unmatched wood, unmatched design, and unmatched height, can see neither witness nor court, and must catch their voices after they are thrown up and over, if not through, the solid wooden barricade. Counsel's next question is hitting the page about the time the witness' previous answer falls to our table.

Our local Municipal Court affords a concrete example of what we mean. Built in the late 'thirties, modern ideas of construction were incorporated in its plans. Our first service in its courtroom found us totally lacking a table. Furthermore, court attachés seemed bewildered at our request for one. On either side of the court are boxes of identical form and stature for witness, and clerk or bailiff—we are not certain which, as it was never occupied. Inquiring of the judge where we might locate a table to report the hearing, he suggested we use the clerk's desk, ten to twelve feet opposite the witness, and entirely out of his vision. Objecting to this arrangement, we asked why a modern courtroom such as that would not have provision for a court reporter. The judge replied that he had drawn the plans for the courtroom, which contained ample and satisfactory working accommodation for the reporter, but that the architect omitted them for the reason that such would have upset the symmetry of the courtroom and left it wholly unbalanced. And so are we.

A Twentieth Century Fund survey reports that about 40 per cent of the communities in the United States do not have building codes.

The Architect and the Hospital Survey and Construction Act

By Perry B. Johanson

VICE CHAIRMAN A.I.A. COMMITTEE ON HOSPITALIZATION AND PUBLIC HEALTH

THE Hospital Survey and Construction Act has by now become a well-publicized law, with its over-all aims and provisions well known to the architectural profession. To the architect this Act is, in effect, a programming agent and check list combined.

The amount of Federal funds available for many states is so small in relation to the over-all hospital needs that the community and the architect may tend to discount the value of the Act.

The survey and planning, now in the process of being prepared in most states, will provide the architect with a wealth of program material not otherwise available except by a research program too costly for the average hospital project.

The state construction program will indicate to the community and the architect the approximate location and minimum number of beds required for the various type hospitals. In the interest of an integrated hospital program, every new project should take its place in the

over-all program regardless of whether or not Federal funds for construction are to be asked for.

After the program of any given hospital project has been determined to the extent of the type of hospital and the number of beds, the architect in developing the plans is to conform to the requirements of Appendix A. This document lists general standards of construction and equipment and amounts to an over-all check list of planning procedure. Briefly it covers the following subjects.

The requirements of the site survey and soil investigation are completely outlined as to the information to be shown.

The requirements of the General, Tuberculosis, Mental, Psychiatric and Chronic disease hospitals are separately and completely outlined by departments. Each room or space required is listed. Variations of requirements for 50 beds, 100 beds and over are noted. Certain rooms are listed as desirable but not mandatory.

Requirements by rooms are also

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included for the Nurses Home, School of Nursing, Public Health Center and State Public Health Laboratory.

Under "General Requirements for Hospitals" are listed dimensions for doors, corridors, stairs and elevators.

Under "Finishes" are listed types of finishes for floors, walls and ceilings in special rooms.

Requirements are listed in detail for structural, mechanical, electrical, elevators and refrigeration; for kitchen and laundry equipment, and for codes governing these parts of the work.

Of special interest to the architect are the requirements for the preparation of plans, specifications and estimates. Three stages are called for. These may be submitted in sequence or the first or second may be omitted and the third stage only submitted.

The first stage consists of an outline of the problem with single-line schematic plans of each floor. A construction outline, description of site, and a preliminary cost estimate are also required.

The second stage amounts to a final preliminary presentation with developed plans, sections and elevations of the building. Outline specifications and revised cost esti-

mates are required. A print of the site survey is to accompany this submittal.

The third stage consists of working drawings and specifications complete and adequate for contract purposes. The requirements are outlined for the architectural, equipment, structural, mechanical and electrical drawings.

The questions of equipment is clarified by three classifications. The first includes all built-in equipment included in the construction contract. The second and third classifications are for depreciable and non-depreciable movable equipment purchased through other than construction contracts. The list and estimate of the equipment under the second and third classification need not be submitted until after the award of the construction contract. This briefly indicates the subjects of interest to the architect.

In a detailed study of Appendix A there is very little to take issue with in the listing of minimum standards. To many small communities with requirements of 50- to 100-bed hospitals, having no facilities or requiring replacement of existing facilities, these minimum standards may appear to be maximum standards. However, no

minimum area allocations are called for except for beds, and several minor spaces. For more desirable standards, the published type plans of the U. S. Public Health Service for the various elements of the hospital, should be followed.

This document should be welcomed by the architectural profes-

sion because here, for the first time, is a collaboration between Federal officials, the architectural profession, the medical profession, and the hospital administration profession, which will undoubtedly result in well-designed hospitals to be constructed under the Hospital Survey and Construction Act.

Five Publications on Hospitals

*By Slocum Kingsbury**

ANYONE attending the hospital seminars held before the last Convention must have been impressed by the fact that the hospital architects were aware that they were faced with a problem. The rapid changes taking place in the medical and surgical fields are calling for a new type of hospital, resembling only remotely the hospital of the past. That the men who were to design them realized this was proved by their willingness to come so far in order to contribute to the

success of the experiment tried out at Grand Rapids.

Another sign of this realization that the modern hospital is a far more difficult building to design than its forebears, is the amount of material being published on the subject. Not all of it has value, yet so much of it has that it is difficult to select what should or should not be read. There are, however, five outstanding publications which can be studied with profit by any architect with even the remotest oppor-

*Mr. Kingsbury received his architectural education at Cornell, thereafter working for a time in New York for Cross & Cross, James Gamble Rogers and York & Sawyer. In the last-named office he did hospital planning, with the late Dr. Goldwater as consultant. Mr. Kingsbury is now one of the consultants to the Corps of Engineers in connection with the design of Veterans Hospitals. His firm, Faulkner, Kingsbury & Stenhouse, of Washington, D. C., has been responsible, as architects or associated architects, for the George Washington University Hospital and the New Orleans Veterans Hospital; and, with Eggers & Higgins of New York, the firm has just been appointed architects for the new \$30,000,000 Army Medical Research Center near Washington.

tunity of being given a commission to design a hospital building.

Of these five the book which might be called basic is *HOSPITAL PLANNING*¹ by Butler and Erdman, written by two men who not only have designed many excellent hospitals but over the years have been able to observe these hospitals in operation. There is little in their book that is startling and not much that is new, but likewise there is nothing which might lead the inexperienced practitioner down the wrong lane. Hospital planning is hardly an exact science but there are certain fundamentals which must be adhered to if the architect's design is to make a workable building. The thoroughness and care with which the subject is approached in this book, makes it therefore, by far the best guide for the architect who is not too familiar with hospital requirements.

ADMINISTRATIVE ASPECTS OF HOSPITAL CONSTRUCTION,² gotten out by the American Hospital Association two years ago, covers somewhat more briefly the same ground as *HOSPITAL PLANNING* but from a different point of view.

¹New York: 1946: F. W. Dodge Corp. \$15.

²Chicago: 1945: American Hospital Association. 25c.

It is published anonymously, and it is extremely doubtful that it was written by an architect; obviously it was not written for architects. Yet for that very reason and in spite of its somewhat misleading title, it is an excellent treatise. It is likewise fundamental and much of what it touches on is what an experienced architect already knows, but as a supplement to Butler and Erdman's book it can profitably be read with care.

Very little, even at this late date, has been written about the special hospital, although most books on hospitals include a chapter or at least a paragraph on this phase of hospital planning. It is encouraging, therefore, to have had published last year *TUBERCULOSIS HOSPITAL PLANNING AND CONSTRUCTION*,³ by J. Bruno Basil. The differences between the General Hospital and the tubercular hospital are not many but they are important. Mr. Basil covers the whole subject and his contribution is a considerable one. And if it encourages others to write about the special hospital, especially the chronic and the psychiatric, it will have served a double purpose.

Books about competitions are

³New York: 1946: American Tradeau Society. \$1.

usually very dull reading and are generally bought only by the competitors themselves. An exception to this rule is *THE MODERN SMALL HOSPITAL*,⁴ illustrating the 1944 Competition conducted by the Modern Hospital Publishing Company. That there are many more small hospitals built than large ones makes this handsomely gotten-up book of great value to the hospital planner. Not only are most of the published designs above the average, but the chapters which preface the book, written by some of the outstanding men in the hospital field, cover both adequately and intelligently those particular problems which make the planning of the small hospital so difficult.

The last of the five publications with which we are concerned, *HOSPITALS, INTEGRATED DESIGN*,⁵ by Isadore R. Rosenfield, deserves more space than can be given it in a review which attempts to cover so much ground. It is in many respects a remarkable book, in spite of its many shortcomings. For, regardless of how annoyed one may become by Mr. Rosenfield's con-

stant attempts to write in the flowery manner, one cannot but admire his unusual imagination and vision. He has, in my opinion, done something few people are able or willing to attempt; he has written a book about hospitals not merely as they have been designed in the past but as they should be designed for the future. Furthermore, this is the first book to my knowledge wherein the reader is told not only how the different parts of a hospital should be planned, but to a certain extent what goes on in each of these parts.

Some day a book may be written for architects which describes in detail everything that takes place in a hospital. It will necessarily have to be a symposium, contributed to by nurses, doctors and hospital administrators. It will give, for example, each step in the preparations for an operation, and each step in the nurses' routine of caring for a patient. It will not serve so well as the actual observation of these procedures but, because a complete study of a hospital in actual operation is hardly practicable, it will be the best substitute possible. For if the architect is to make any real contribution to the planning of our future hospitals he should know more about these

⁴Chicago: 1945: The Modern Hospital Publishing Co., Inc. \$7.50.

⁵New York: 1947: Reinhold Publishing Corp. \$10.75.

things than he ordinarily does. And until such a book is written we may be thankful for Mr. Rosenfield's. It is unfortunate that he did not carry further an idea which he apparently seemed to realize was important.



An advantage of reviewing other people's books is the opportunity it gives of expressing, under the pretense of criticism, one's own opinions. I have always felt, for instance, that in most books on hospitals far too much emphasis is laid upon what is called "programming." As background for the actual planning this possibly serves a purpose. Few architects in general practice, however, are qualified to participate in the difficult task of deciding such questions as how many beds a hospital in a given community should have, in what part of the city it should be located, or how much space should be allotted to out-patient clinics. It is enough to demand of the general practitioner that he design a good building after he has been told what is to go into it. That he should be consulted in regard to the site goes without saying, for that is important in any type of project. But to ask even those

architects sufficiently experienced in hospital work to help in the "programming," merely means that they will have so much less time for that part of the planning they alone are qualified to do. Furthermore, in spite of the fact that so many writers seem to suggest that it is part of the architect's responsibilities, the number of instances where an architect is called upon to assist in making these decisions is almost nil.

To my way of thinking, a further criticism of these five publications is the lack of space devoted to what surely is the hospital's greatest problem today: increasing costs and the growing shortage of proper personnel, particularly in the nursing field. Here and there this is touched upon, yet it is surprising that, with this problem so well known and so much discussed, so little is written about it. It is quite proper to insist that a hospital should provide plenty of sunlight and a pleasant view for each patient, but in the end people go to hospitals primarily to be taken care of. If to give to each patient's room the maximum of southern exposure and its share of the prevailing breeze makes it impossible to design a compact and efficiently laid-out building, it would appear

that we are allowing the tail to wag the dog. In many recent designs for hospitals, excellent as they otherwise are, the distances which doctors, nurses and help have to travel are far from minimum. It would seem, therefore, that we cannot be reminded too often of the difficulties in administration this brings about. Only in the rare hospital with unlimited funds at its disposal does the architect dare to forget this. And it is on this account that it should be emphasized again and again in all publications on hospital planning.

For any architect, reading books on hospital design is not a substitute for visiting existing hospitals and talking to their staffs. This could likewise be put the other way

round. It is encouraging, therefore, that together with the many excellent articles which have recently appeared in the magazines we have these five publications to use as source material. Written as they are by men with recognized reputations in hospital planning and administration, it is to be hoped that they will have a far-reaching influence. The design of a modern hospital is one of the most difficult problems an architect has to solve. Like that of any complicated building, it means not only time and effort spent over the drafting-table but hours of study and research. For this last I can think of no better place for the architect to turn than to the pages of these books.



Walter R. B. Willcox, F. A. I. A.

1869-1947

THE life of Walter Willcox, which ended on April 20th, left a notable record of service and accomplishment from which The American Institute of Architects, his Chapter in Washington State, and communities and individuals coming within the scope of his in-

fluence, profited to a marked degree. He will be held in affectionate remembrance by the many who were privileged to know him.

Leaving what appeared to be a promising business career in his early life, architecture made to him so strong an appeal that he

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made a new start in the architectural field. Beginning as a student in an architect's office and in the School of Architecture at the University of Pennsylvania, he afterwards began practice in his native city of Burlington, Vermont, where his energy and determination brought abundant success. Not satisfied with this and a pleasant home life, he longed for struggles in a wider field and contacts with others in his profession in a more progressive community. He found this in Seattle, where he made a new start unheralded and unknown with a partner, William J. Sayward, who came with him from the East and later returned to become prominent in Institute service from the South Atlantic District. On their arrival in Seattle, in 1907, building opportunities in the Pacific Northwest were at a particularly low ebb, and while endeavoring to build up an architectural practice Walter Willcox immediately began to take a lively interest in the Chapter and in the community, where his work might be effective.

In the Chapter he gave valuable service as Secretary and President and was its first delegate to an Institute Convention. So strong was the impression he made on his fel-

low architects in The Institute, that he was elected a member of the Board of Directors and afterwards Vice-President. His efforts were effective in making The Institute a truly national organization and, with his unselfish viewpoint, harmonizing local antagonistic differences. He was made a Fellow in 1910. Early realizing the importance to Seattle of a city plan, he was its earnest advocate, and when a plan was successfully provided for by the Municipal Plans Commission of 1911, represented the Chapter as a member of this Commission. Here, as a fellow worker with Mr. Bogue, the expert engineer who was the author of the plan, he was the architectural influence.

He later applied himself successfully in a new field when, in 1922, he was prevailed upon to head the School of Architecture at the University of Oregon. Here his personality and sympathy with the students were impressive in his courageous departure from the usual methods of teaching. His earnest promotion of his own lofty ideals was inspiring, and made a strong impression on all with whom he came in contact, however different their opinions might be in architectural education

and in the field of economics to which he became subsequently devoted.

He has left behind him an im-

pressive record of unselfish service and devotion to ideals with worthwhile results.

CHARLES H. ALDEN, F.A.I.A.

Honors

WELLS I. BENNETT, F.A.I.A., Dean of the College of Architecture and Design, University of Michigan, has been honored by Syracuse University with the Degree of Doctor of Fine Arts.

Admiral BEN MOREELL received from Princeton University, at its final Bicentennial Convocation in June, the degree of Doctor of Engineering. The citation: "A brilliant engineer both ashore and afloat, whose scholarly and ener-

getic application of the engineering approach has produced significant technological advances of a high order. Organizer and first in command of the Seabees, whose fabulous exploits and achievements played so substantial a part in the victory of the Pacific."

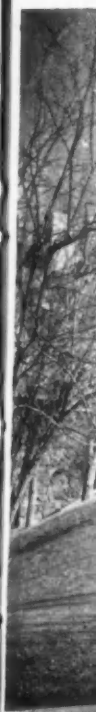
WAYNE F. KOPPEL has been appointed head of the Department of Architectural Design and Housing Research of the John B. Pierce Foundation.

News of the Chapters and Other Architectural Organizations

NEW YORK CHAPTER has sponsored, jointly with the Store Modernization Show held in Grand Central Palace, a competition for the modernization of a shopping center. The jury, consisting of Morris Lapidus, Morris Ketchum, A. Gordon Lorimer, Thomas H. Creighton, John Ragsdale and Henry Wright, awarded

first place of \$250 to a Cornell team: Blake Allen, Olaf W. Shergren, Jr., Alberta J. Cassell and Eugene M. Bertin. Second place (\$150) went to Edward L. Friedman, of Pratt Institute, Brooklyn. Third place (\$100) was won by H. B. Grant, of Carnegie Institute of Technology. Two Honorable Mentions, each bringing \$50, were

AUGUST, 1947



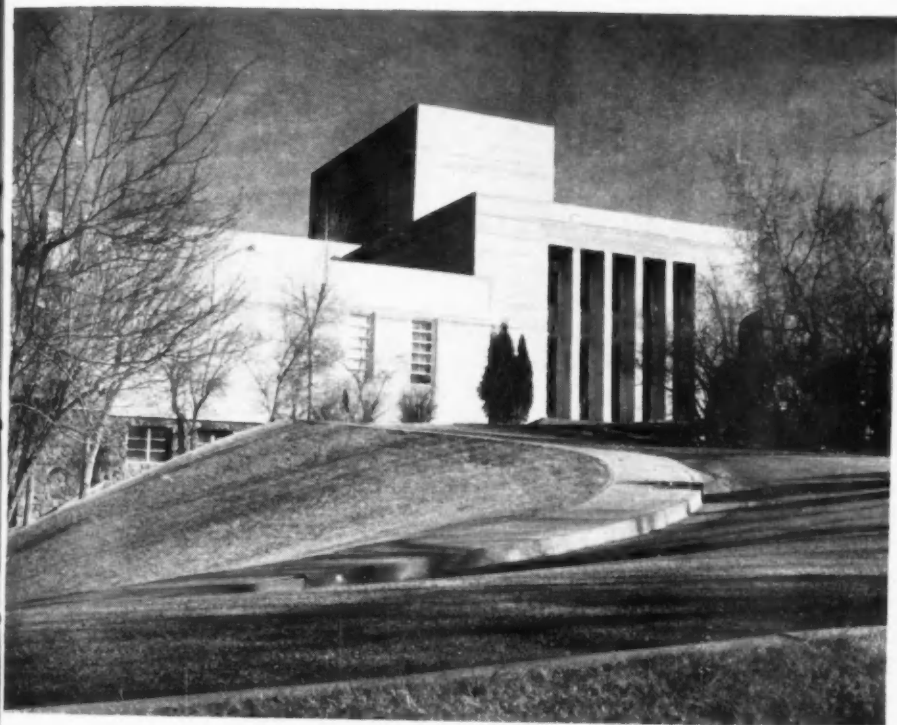
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FINE ARTS CENTER, COLORADO SPRINGS, COLO.

THE MAIN ENTRANCE

JOHN GAW MEEM, HUGO ZEHNER & ASSOCIATES, ARCHITECTS

Photograph by Laura Gilpin



FINE ARTS CENTER, COLORADO SPRINGS, COLO.
 GALLERY FROM INTERIOR COURT
 JOHN GAW MEEM, HUGO ZEHNER & ASSOCIATES, ARCHITECTS
Photograph by Laura Gilpin

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awarded: to Blair Reeves, of the University of Texas, and to Gerald A. Doyle, Jr., of Western Reserve University.

WASHINGTON, D. C., CHAPTER held a garden party on June 12 at The Octagon, combining with this last meeting of the spring a hobby show of members' diversissements. The exhibits ranged all the way from water-colors through furniture, boat building, radio cabinets, photography, sculpture and what-have-you. First prize went to William Dewey Foster for a collection of "marine sculpture"—bits of coral from the Virgin Islands and elsewhere which the waves had

formed into something resembling man's own attempts at sculpture in the modern manner.

VIRGINIA POLYTECHNIC INSTITUTE Student Chapter, A.I.A., is stimulated by the establishment of a new chapter of Tau Sigma Delta, honorary fraternity in architecture and allied arts. Since its establishment in 1913, Tau Sigma Delta has formed chapters at a number of the member schools of the Association of Collegiate Schools of Architecture, and has elected over 1300 members. Eight of the men who were raised to Fellowship in The A.I.A. at Grand Rapids are members of the Society.

"Euclid alone has looked on beauty bare."

News of the Educational Field

CARNEGIE TECH announces the appointment of John Knox Shear, 1938 graduate of its Department of Architecture, as Associate Professor and Assistant Head of the Department of Architecture, effective September 1st next. Mr. Shear holds, in addition to his Bachelor

of Architecture degree from Carnegie Tech, that of Master of Architecture from the same institution and also Master of Fine Arts from Princeton. He joined the Carnegie Tech faculty in 1941, served as ensign and finally as lieutenant in the U. S. Naval Reserve, 1942-1946. Mr. Shear returned to Carnegie for two semesters, and has since been assistant professor of architecture at Princeton.

JOURNAL OF THE A. I. A.

Temperature Distribution in a Test Bungalow

UNIFORMITY OF TEMPERATURE throughout houses is a tacitly accepted American ideal of heating. It is probably never attained in practice, and departures from it depend upon the design and construction of the house and upon the characteristics of the heating system or device used. Distribution of warmth in houses has usually been judged only qualitatively by individual engineers on the basis of personal experience or observation. Quantitative data have been limited almost entirely to laboratory tests on parts of the system. In order to obtain data on the temperature distribution in an entire house, a series of heat distribution tests of several types of heating systems were conducted at the National Bureau of Standards by Richard S. Dill and Paul R. Achenbach.

A full-scale house, in which complete heating systems can be installed, was constructed at the Bureau. Designated as a test bungalow, it is similar in plan to House B described in F.H.A.'s Technical Bulletin No. 4, "Principles of Planning Small Houses." It has four rooms and bath, with a central hallway. The walls are conven-

tional in construction, consisting of $\frac{1}{2}$ " gypsum board on the inside and 2" x 4" studding with sheathing and lap siding on the outside, separated by a layer of building paper. All the windows are double-hung with the exception of that in the bathroom, and one of the two in the kitchen. The double floor of 1" pine includes building paper between the sub-floor and finish floor. For the heat distribution tests the walls were not insulated, but a 2" blanket of wood-fiber insulating material was laid over the ceiling. Weather-stripping is not provided for windows or doors.

During the tests, data on temperature conditions inside the bungalow were recorded by various types of instruments. Heat-transfer coefficients for floors, side walls and ceilings were measured by the Nicholls type of heat-flow meters fastened to the surfaces. Thermocouples located at various levels of the rooms, on the top and bottom of the floor, on the inside and outside of the walls, and in the basement and attic air, gave a complete record of temperature conditions. Observations were made while heat was being supplied in turn by an

experimental electric heater, an oil-burning warm-air furnace, a jacketed gas-fired space heater, a jacketed oil-fired space heater, a single gas-burning gravity floor furnace, two gas-burning gravity floor furnaces, a gas-burning floor furnace with forced circulation, an oil-burning gravity floor furnace, and a conventional gravity hot-water heating system.

From the standpoint of comfort, the temperatures from the floor to 5' above the floor are more significant than the temperatures at higher levels. The tests showed that the average temperature differences produced in the test bungalow between the 2" level and the 60" level, with continuous forced circulation of air through a plenum chamber, with a forced-circulation gas floor furnace, and with a gravity hot-water heating system, were less than 10° F. when the outside temperature was 32° F. to 38° F. The temperature differences produced in this same zone by all the other devices tested ranged from 14° to 18° F. at comparable outside temperatures.

The average horizontal temperature differences between rooms at all levels of measurement ranged from 2° to 4° F. for the several floor furnaces and for the gravity

hot-water system. For the electric warm-air furnace and the oil-burning furnace, when attached to a plenum chamber, these differences were nearly as small for the 2", 30", and 60" levels but were considerably greater in the upper levels of the house. The temperature difference between rooms was greater for the space heaters in the living-room than for the other heaters tested. This effect can probably be attributed to the fact that the rooms other than the one containing the heater are warmed by the overflow of heat from the living-room through the doorways. Except for the space heaters, the average horizontal temperature differences from 2" to 60" above the floor did not increase with lower outside temperature.

Certain types of heaters may be suitable for houses of one construction and not suitable for other constructions. For example, a high temperature near the ceiling would not cause much additional heat loss if the ceiling were well insulated, or an insulated floor might permit the use of heaters that do not deliver warmed air at or near the floor level. Furthermore, some types of heaters that provide comfort in areas where extremely low

temperatures do not occur may not provide comfort in colder climates.

Although standards of performance in the field of vertical or horizontal temperature differences in residences have not been established, the Bureau tests indicated that the air temperatures in the living zone of all rooms should be in the range from 65° to 80° F. for comfort, when heated by the conventional types of heating systems. A floor temperature of 60° F., when continued for one hour or more, was found to be too low for foot comfort; when a floor temperature of 65° F. was continued for the same period, discomfort was no longer apparent. It was further observed that air temperatures of approximately 85° F. around the level of the head became oppressive, especially if the air had an appreciable velocity.

The results obtained with the devices used in the test bungalow show need for further improvement in the design of house construction and heating systems, in order to provide comfort in all rooms of basementless houses. A more uniform temperature can probably be obtained either by the use of more insulation in the house elements,

by improving the heat-distribution systems, or by a combination of both.

NOTE: The complete technical report on this project is contained in the National Bureau of Standards Building Materials and Structures Report BMS108, "Temperature Distribution in a Test Bungalow with Various Heating Devices," by Richard S. Dill and Paul R. Achenbach. BMS108 is available from the Superintendent of Documents, Washington 25, D. C., for ten cents a copy.



International Organization For Standardization

At its opening meeting June 18, 1947, in Zurich, Switzerland, a joint committee was formed to promote cooperation on standardization matters of mutual interest. Representatives of the International Civil Aviation Organization, International Labor Organization, International Federation for Documentation, International Dairy Federation and the UNESCO were on hand to assist in dedicating the efforts of ISO to the advancement of industry and commerce throughout the world.

AUGUST, 1947

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Building a Satellite City

By Philip M. Klutznick

PRESIDENT OF THE AMERICAN COMMUNITY BUILDERS, INC., CHICAGO

THE decentralization of large concentrations of population should be part and parcel of any program to redevelop slum and blight areas in our urban centers. Since overcrowding and congestion are among the most important reasons for slums, the greatest sin that we can commit is to replace all of our high-density homes with equally high-density areas. We cannot escape all of the evils of high-density by low land coverage.

Of course, there are some city areas that have become slums because of uneconomic land utilization, and which can support as much if not more population than that presently supported. By and large, however, many of our urban centers will need to develop additional outlying neighborhoods and communities if they are to enjoy the full and sensible fruits of urban developments when it comes. That is why we are hopeful that the building program of the American Community Builders, Inc (ACB)

may prove to be an important step in the redevelopment of Chicago, in particular and as a guide-post for the redevelopment of other large centers of population throughout the nation.

The ACB intends to build, 30 miles south of the Chicago Loop, a completely new and modern city for an estimated 7000 to 8000 families. It contemplates building more than just a suburban town. It has planned a satellite city, embodying the concepts of modern city planning, complete with commercial facilities, utilities, and a firm industrial base. Detailed construction plans for the first 3,010 dwellings has been concluded and the Federal Housing Administration has approved the ACB application for F.H.A. mortgage insurance totalling \$27,500,000. Because of the intense need for rental housing, particularly by veterans, the ACB has planned the initial section on a rental basis. The rental development is the first step in

the program to create a well-planned, fully livable town which will permit open, safe, neighborly living for middle-income families. The first construction is calculated to meet the current dire need for rental facility and at the same time to weave into the over-all plan for the development of the community.

Construction of the 2400-acre site will begin late in July, and the first houses will be completed in early 1948, according to present plans. Surveying for location of home sites and roads has already begun. The site selected, after careful study of possible locations in the Chicago area, consists for the most part of lightly wooded rolling hills with a permanent green belt in the form of a bordering forest preserve. It is near heavily concentrated industrial centers in South Chicago and its surrounding satellites, and is serviced by existing highways and three railroads providing both passenger and freight service. The area surrounding the site within a ten-mile radius combines rich Illinois farm lands, productive truck-garden areas, recreational space, typical suburban towns and heavy industrial concentration, in balanced proportions. Within a 20-mile radius, the emphasis becomes in-

creasingly urban and industrial with the inclusion of the heavy concentrations of industries in both Indiana and Illinois. Rail transportation to the Chicago Loop in forty-four minutes via the Illinois Central suburban lines, at special commutation fare of eighteen cents, is available from nearby stations. Connecting bus service from the community to the stations has been arranged at five cents a ride. The South Suburban Safeway Lines, Inc. is now obtaining equipment and making arrangements to provide the town with a complete transportation system at five-cent rates to any point. The lines will also provide adequate connections with adjacent cities and transportation terminals, making possible extensive commutation facilities. Excellent highways include the Lincoln Highway at the north border, the Governor's Highway, a high-speed artery, and excellent country and state roads provide safe, fast means of transit for private-car transportation.

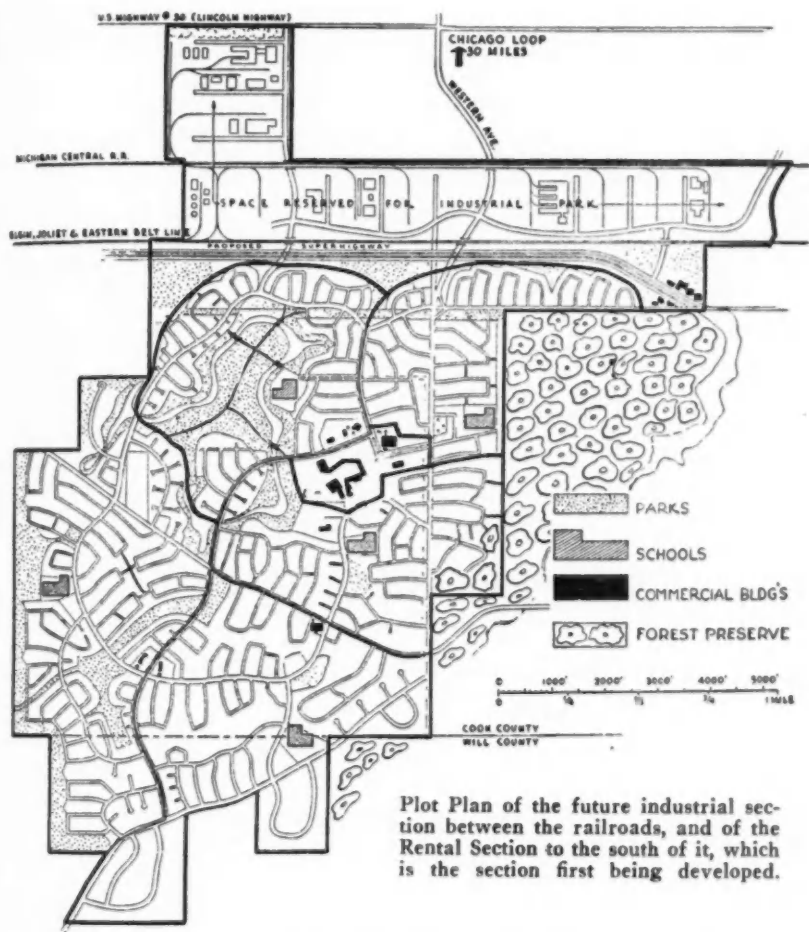
I point out the important characteristics of the site because of the two stages through which the city will pass. The initial rental stage will consist for the most part of commuters to either the Chicago

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Plot Plan of the future industrial section between the railroads, and of the Rental Section to the south of it, which is the section first being developed.

Loop or to the nearby employment centers. Thus, at first we will have a suburban town comparable to the greenbelt towns of the Resettlement Division. Like the greenbelt towns, the ACB initial section will be in no sense indus-

trial, and will consist almost entirely of row houses, which we like to call "town and country" dwellings because they are being built in beautiful, open and green courts. Moreover, like the greenbelt cities, our project will have a low den-

sity—about ten families per acre.

Plans by Loeb, Schlossman & Bennett, the Chicago architectural firm participating in the project, are guided by family needs. They provide for large living-rooms and bedrooms, with adequate dining-rooms and modern kitchens and bedrooms. Each unit includes a full basement. Monotonous and regimented appearance is avoided by varying the size, design and exterior treatment of dwellings and by taking advantage of natural site conditions.

The second stage involves another building program, of dwellings which will be sold. These will include primarily one-family units and twin houses, in addition to "town and country" models. Coinciding with this construction will be the development of an area of non-nuisance industry within 420 acres reserved on the site, and the completion of main and supplementary shopping and commercial centers. The result will be a satellite city with part of its own industrial base providing tax support and an employment source.

It is in the over-all picture that a comparison between the ACB project and the greenbelt cities is interesting. The greenbelt towns

were a reaction to the smoke, dirt and discomfort that were a part of the industrial system. As a result, complete emphasis was on beauty and the development of social and community life. The greenbelt was a protective measure, in a sense isolating the town. The result was a suburban town depending upon the commutation of its residents to large employment centers. Subsequently, the culture and the community spirit which was the aim of these towns belonged to those who stayed at home—the children and those of the women who are not commuting wage-earners.

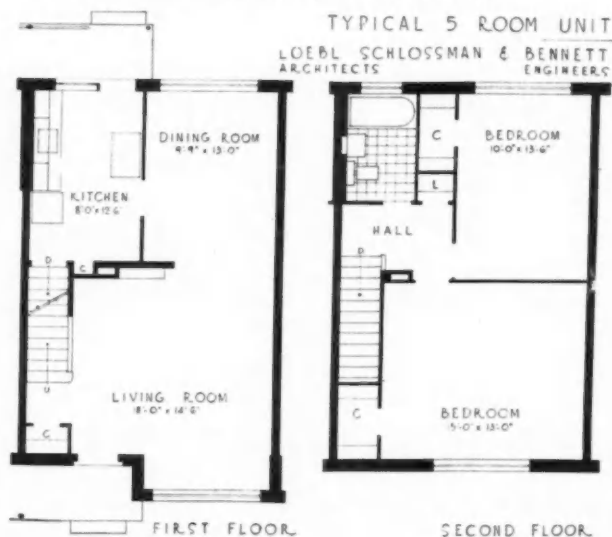
Out town in its second stage will be a truly independent city, economically supported in part by its own industries. The 420 acres of industrial area which will be leased or sold lie between the two railroads that run in parallel at the extreme north border of the town site. We have prepared a general plan for the industrial development of this area to insure the selection of non-nuisance industries. The construction of selected industries will be approved by ACB to secure architectural unity.

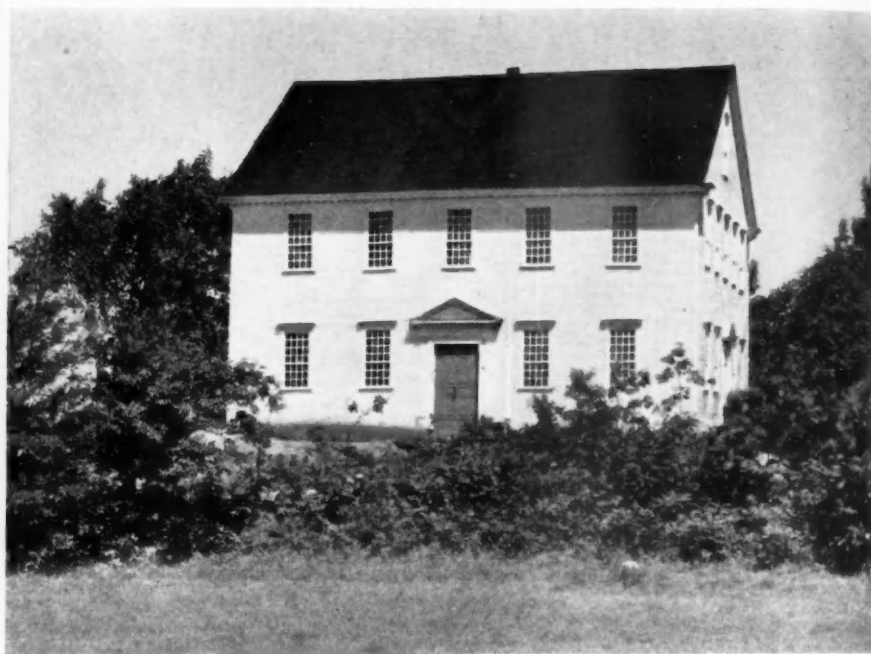
No private enterprise which must make a reasonable profit can





PRELIMINARY STUDIES FOR DWELLINGS IN THE RENTAL AREA OF
PARK FOREST, COOK COUNTY, ILL.






Do you know this building?

Sandown Meeting House (LATE 18TH CENTURY)
Sandown, N. H.
Photograph by L. C. Durelle, by courtesy of
Historic American Buildings Survey

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The AIA*

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go as far as government-subsidized projects in such things as acquisition of land or land coverage, nor can it reach as far down in the income brackets. The ACB, a private company incorporated under the laws of Illinois, acquired all land privately without reference to any public power for land acquisition. The size of the greenbelt separating the town "from the outside" is governed by economic factors that must add up to profit for the builders. In our instance, we are fortunate to have an ideal greenbelt in the form of a forest preserve which borders the town site on the east. Moreover, we have been able to provide—even in the rental section—a truly large amount of green land utilized in some cases as tot yards for small children; in other instances as playgrounds for older members of the family; and in still other instances, as park area for family and communal activities. The parklike appearance of the residential areas is further enhanced by the shallow depth of our multiple-family houses. They average about 28 feet in depth. That compares favorably with the planning and building now going on.

Intensive surveys revealed that we could not profitably build a

community of this nature for as low an income group as accommodated in the greenbelt communities. Our plans are based on the assumption that the income of the prospective townspeople will run from about \$2500 to \$6000 per year. That was as low in the income brackets as could feasibly be reached in an undertaking of this nature.

The greenbelts, like most public housing developments, emphasized a strong community spirit, and the Government provided buildings for community activities, and built schools as centers of cultural, athletic, social and educational interests. The ACB must emphasize the development of community spirit and activity by residents. The ACB will assign locations for churches and schools that are architecturally sound as community centers, but will be unable to do the construction in most cases. This is partly for economic reasons, though it should be remembered that real interest comes with active participation in the development of a project.

Work on a planned, integrated commercial center coincides with the residential construction. Development of the main and second-

ary centers will parallel the development of the housing, with priority of building based on family needs. The end result in all cases will be shopping centers distinguished by the elimination of crossing vehicular traffic, long uncomfortable distances between shops, and parking difficulties, characteristic of most communities. Stores will face a green, enclosed mall; 600 square feet of parking area are adjacent to the outside perimeter.

It is obvious that our building program involves a great deal more than building four walls and a roof—just shelter. And for good reason.

The growing dissatisfaction of the consuming public with the product of the homebuilders' art is not alone with price or rent. Whether it is justified or not, there are evidences on all sides that the consumer is seeking more than four walls in which to live. He is being stimulated by a growing in-

telligence on the whole housing front. One of the incidents growing out of a national focusing of attention on the housing emergency is the corresponding increase in the intelligence of the consumer about the housing product. He is familiar with, and anxious for, well-planned communities and well-planned developments. He demands purchaser's conveniences that go far beyond the old-time standard. He makes up a great market that yearns for outdoor living as well as for inside comfort, for gadgets and environment, for free and easy traffic ways and yet safe pedestrian passages, for accessible schools and market places, and inside as well as outside recreational opportunity. Here is a growing demand that cannot be ignored. The only response to that type of demand is a well-planned community or neighborhood, which in the case of the ACB is enlarged to the proportion of a well-planned town.



"I have never known an 'old architect,' no matter how grey his hair, but I never knew how young you could be until I attended this Convention."

—A Detroit Student in the Michigan Society *Bulletin*.

AUGUST, 1947

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The Contemporary Architect and His Education

IN TWO PARTS—PART II

By Ralph Walker, F.A.I.A.

A talk given before the architectural students in the University of Pennsylvania, Philadelphia, on January 15, 1947.

FUNCTIONALISM is not merely the unconsidered use of concrete forms (anything can be made in concrete and shown in a clever photograph taken before the destined cracks show, as inevitably they will), plate glass, or steel construction, or in the widening of a corridor at one end—none of these actually have much validity to a true architect, nor would their use be barred if intelligent. Nor is true economy to be found in a spare use of a few materials, but rather in the fullest use of the world's resources to fulfill man's complete needs. In functionalism there is a great distinction between "life motifs" and mere "cliché motifs". There is a real distinction between the natural in contrast to the abstract and to the surrealist. Progressive architecture is not merely copying the most recent fashion; it can only come from consistent analysis of today's problems.

There will always be a continuing need for an understanding of human needs underlying any de-

sign problem, for in a world of growing knowledge every new design must be thought of as special and at the same time with a realization that standards which are fixed are stumbling-blocks to further improvements.

I cut my own school education short in 1912, when I left M.I.T. because I disagreed with the methods of teaching to be found there. Our class had been given an opera house problem, still one of the most interesting of buildings to design because of the many facets to the life of the theater. The student given the highest place had copied almost line for line the steel engravings of the Paris Opera House, copies made with a six-H pencil. Today, no doubt, the student will copy as blindly Corbusier's Palace of the Soviets.

I had the opportunity, however, of meeting two men of the theater who had just come from Europe—Sam Hume, who was attached to Baker's Workshop, and Joe Urban. Both had working models of stages, both were discussing all the latest

ways of stage mechanics, the new stage decor, new types of seating arrangements, the stepped audience floor, for instance. My days were complete with revolving stages, cycloramas, domes, "Fortuny" lighting, visits to the studios and to theaters, and reading plays. I especially remember Urban's sets for "Pelleas and Melisande", their mystery with their walls of magic and light, and the famous Urban blue.

I got for my pains the lowest place on the line because my drawings were not complete. There were exhibited with them, however, many notes, sketches, indicating the modern stage of thirty-four years ago. There were many attempts on my part at understanding the theater but apparently none on the part of the faculty for what the student had accomplished.

All education is self-education, and for the first time as a student I had ceased to imitate and had obtained a glimpse of what a method of approach to a design solution might be. I did not know it at the time but I was on the way to learning philosophy.

A student must realize that the number of problems solved is not important—it is the development of a method of study. Imagination

comes not from making many solutions—it comes from a wide uninhibited view of life itself.

Education, formal or self, to be valid, must lead from that which is so natural and easy for the young, i.e. *imitation*, into *philosophy*, which is so difficult at any time. Imitation is the easy acceptance of someone else's thinking or of something which for the moment is in fashion. Both may well be, as often they are, completely in error as regards social relationships. The growth of the International Style, to me, was more indicative of universal laziness than of universal need. Philosophy, if accompanied by action, so as to test it by experience, is the beginning of the judgment of values. The scientific method is one of orderly and controlled experimentation.

It is my observation that too much imitation occurs in contemporary architecture without benefit of any kind of experimentation. I was amused to find in Mexico City, reputed to have a marvelous climate, that they were building great glass walls in skyscraper form and advertising "Clima Artificial". Mexico City has an average temperature in its warmest month of 65°.

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In Brazil, where it has been used, the "Brise Soliel" walls seem to me actually a clumsy and needlessly expensive device, doing a service which might have been developed in a much more simple way; after all it is but another and larger jalousie; in one case approximately 10% of the volume of the building cube is used. It is well to remember that every problem has within it several solutions; *the more complex the problem the greater number of solutions possible*. Here, in both Mexico and Brazil, one wonders if the skyscraper concept may not be at fault as well as the lack of observation of native economy.



Recently I went over a whole series of programs given during a school year to the students at one of our architectural schools, and was interested to find that the professor each time had done all the research. One program also made a definite statement as to what was the best building of its kind in relation to a problem. Here, again, I was interested because adjacent to that school is another famous for the revolution it developed in the type of building called for in the program. At no time in any

program was it ever suggested that personal contacts might be made which would help the student obtain his own judgment as to what was good. Again, recently, two lads from Liverpool University who worked for me, after visiting another architectural school near New York, told me they thought the work to be too regimented and the programs too complete in detail; that in their opinion there was no opportunity for the student to develop his own critical choice.

A thorough understanding of the program can only come through its preparation. No building can be successfully designed unless the architect himself has written the program in conjunction with his client. Out of the hundreds of men who have passed through our office, only very few have had the slightest idea what type of research is necessary to prepare a program; that the mere statement of room sizes is not enough.

Years ago we made in our office a study of opera houses. Besides studying the physical aspects, we picked the minds of over a hundred people of reputation here and abroad—stage directors, orchestra leaders, authors, actors, singers, performers, stage designers, engineers. We got together in free

conference the finest minds in the theater. Maude Adams, for example, was gracious enough to give us a great deal of time, and we learned from her what the actor does for an audience of intimate range and also what qualities are necessary for a heroic audience of fifteen thousand, for she had played to both extremes, and with such intelligence as to what timing in voice and gesture meant under diverse conditions.

We also made our own tests of what sight lines meant in both distance and height, and, because we could not find any other adequate space, we made them in the Grand Central Station. We now think we know a little something of the theater problem, not only what the audience sees but what the theater needs.

I have suggested several times to the heads of architectural schools that successful men are so in love with their work that not only would they be honored to talk to architectural students concerning their related problems, but they would spend their own money to do so. In my own experience I have found only one industry so secret that it was unfriendly, and that was the one which makes cosmetics;

I learned all I wished to know about it from some fifteen pharmaceutical firms who also made similar goods. Generally Macy does tell Gimbels.

The architect, if he is to develop leadership in a world that demands design ability not only in building but in cities and in all aspects of life, must be a broadly educated man, nor should he be in a hurry. Proficiency in architecture is not something gained in a moment and then enjoyed in laziness. There are two kinds of practitioners—one who works stated hours, who opens his office and closes it on time and calls it a day. He will without question live long and not too richly. *He is the technician* whose hands and mind are generally used for another's benefit. There is the other whose work fills all his waking hours, whose interests are far beyond the immediate problem, whose life is devoted to study of future opportunities. He too may be paid badly, but his life is rich in return for the interests he develops. *He is the Professional Man.* He is the man whose constantly widening background permits him to walk—in engineering and social understanding—with presidents or shoeblacks, librarians or porters, scientists or glass-

washers—the gamut of life which comes up in his travel to gain the knowledge necessary to interpret life.

He will first, as a student, need an apprenticeship to culture, for the architect must not believe that yesterday stopped just before the dawn of today. He must appreciate that the understanding of man is more fundamental than that to be acquired in the current architectural press, no matter how brilliant it may be; that man's cultural attainments are many-sided and his high points in history worth noting. I believe that we in America especially should be aware of the beauties of our own political heritage and of the beauties of our swift-moving language. No architect can understand America and its social needs who does not know Jefferson, Thoreau and Whitman, and what the words they sang can mean; otherwise they are but following, and cleverly no doubt, modern cubist painting and tortured sculpture as indicative of an architectural solution to human needs in a free society. The architect needs a firm background of philosophical approach to an understanding of the future, through an appraisal of his own people, and to achieve this he should be fully

aware of the humanities of his own time.

It seems to me that the architect living in a world which has seen inventive genius expand as never before, and yet is unable to meet the social problems of the day, also needs a reorientation toward his problems, an understanding of the whole relationship of his abilities to society.

I said before I thought that the architect and the doctor of medicine more nearly parallel each other in their need of human understanding, and my final advice to my young man, if he were to think of being an architect, is that he give his life toward the attainment of these mental tools so necessary to professional life.

All architects must have two sets of aids: one physical, the instruments for use in the precise art—age-old helpers to good drawing and clear definition; the other, mental tools which are sharpened only in the pursuit of an understanding of man and his needs.

Perhaps the first of these mental tools is intellectual curiosity—an ability to seek information wherever it may be found. It will be a tireless, continuous process of more and more intelligent interro-

gation and mental-note making. Curiosity in an architect's life must have a wide range from technical know-how to human understanding.

The second is judgment, which is an ability to evaluate what is really important. This is attained only in long practice—not all values are those of logic, some come through intuition.

The third is the quality of tolerance—which is both a virtue and an ability to understand the requirements of others. Never forget that often what seems like nonsense may well be a lack of comprehension on your part of what may be of utmost importance to others.

Curiosity, judgment and tolerance are the progenitors of imagination, because they should lead toward wide experience; and well-rounded experience forms the background to future considered thinking and so directly into imagination.

There are two virtues which the architect must practise; they are patience and perseverance. The former is an ability to plan complex work through the many conferences and diverse opinions and final needs—and then watch its slow accomplishment. I have

come to question any architectural design which has an Athena-like birth. Every complex structure, like man himself, needs a period of gestation, and can only come into being through exhaustive labor pains. The latter virtue is the ability to understand compromise and still steer to fulfillment a well-considered design. Compromises are the little moths which eat away the best of designs.

And there is a tool most difficult to name. It lies wholly in the restraining quality of one's own culture. It is the achievement of an architecture which is fine but without pretense, is constrained without losing its youthfulness, which has individual uniqueness and is without imitation.

All of these can come only through a persistent desire to know for whom you build and for what purpose, through a continuous and understanding research into human qualities.

Then, finally, there is the vital tool of critical analysis, which should be constantly used not only against your own work, but always against the seemingly desirable work of others. If you will take any philosophical approach, including mine, and turn it about, you will find for your own self what

real virtues it possesses. The greatest fault in the architectural profession is that it does not understand that opinions, i.e. designs, are debatable; that because one does not like the child of his imagination (or lack), one does not necessarily think the designer personally is a worm of the first order. The architect, being a relatively latecomer in the professions, has a feeling for the defensive, and spends too much thought in becoming offended if his works are criticized.



I would like to take further time and criticize some modern thinking in design. To me it has been of great interest to find in the same era the strong contrast now seen in the conflict of the primitive and the sophisticate. This contrast is general in sculptural art and painting, both of which are strongly neo-primitive and imitative of emotions belonging to peoples living in savage cultures. Against this is the whole sophisticated philosophy of the building being a machine, functionally esthetic in a standardized and internationalized intellectualism.

Shall we take, for example, a piece of sculpture by Lipchitz? One must appreciate that its qual-

ity could not have come into being in European culture without a knowledge of savage Africa and without a decadence within the home culture itself. For no longer can the home culture supply sufficient vulgar creative force. European urban civilization has finally to imitate other cultures which still possess vulgar strength or can be seen in museums.

Or again, a piece of modeling by Henry Moore. Here the urban civilization of the Anglo-Saxon, no longer a dominant in the world, has created a form far removed from the original home culture which had in the past created a high point in aristocratic elegance—one outstanding in its appreciation of individual human need both in physical requirements and sense of beauty. Here again is an imitation of emotional experience from a cruder civilization. Anglo-Saxon emotions have disappeared; all that is left is nervous tension—the tension of modern city life which tends to destroy the simple human emotions.

This modern seeking of emotional content in the crude past is to be found in the most modern of painters—Picasso, who hopes that by primitively expressing human external relationships he may re-

veal some of the inner struggle. The results are the same: a lack of approach to the depths of man's emotional needs, a withdrawal of the artist into abstraction—intelligentsia talking to themselves. As I said before, there is a real distinction between the *natural* in contrast to the abstract and the surrealist.

In contrast, take for example one of the historic backgrounds of abstract modern painting, either a Byzantine mosaic or one of the frescoes in the eleventh-century Romanesque Church at Tavant in France. Here you have natural primitives, and it is easy to appreciate that the original vulgar grotesqueries are far finer in execution and feeling than the vainly imitative twentieth-century painting, where there is a replacement of natural vulgarity with one born of urban tension and fatigue—in our time a sign of the impotent, in the earlier centuries a natural living seeking for betterment.

The question comes into my mind whether the whole concept of urban life—the whole quality of its pattern—may not be continuing toward a wrong solution. I believe that we architects must help find a solution which offers “the free opportunity of an individual life in a willingly coordinated so-

ciety.” We are seeing again and again in our modern planning great geometrical patterns suggested as having meaning for modern living. The question which arises in my mind is whether there may be truth in Spengler's idea as noted in “The Soul of the City,” “Rootless, dead to the cosmic, irrevocably committed to stone and to intellectualism, it develops a form-language. Every trait of its essence—not the language of a becoming and growth, but that of a becomeness and completion, capable of alteration certainly, but not of evolution.” (Page 107, “The Decline of the West”—Alfred Knopf, 1928).

We now see this form-language in buildings with walls of glass, on stilts, with end walls solid and indicated as title construction; lally columns, pipe railings, V-supports to open shelters and a kind of Baroque cyma-reversa — all found in the oft-repeated motifs in imitation of Corbusier's building in Moscow, and that known as “La Cité de Refuge” at Paris, two buildings which will furnish all the modern clichés for all the little imitators. And imitations too often used without knowledge of the many faults in the original buildings.

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Again in contrast, I would point to Arnstein House in Sao Paulo, where modern thinking has gone well with the local social requirements. Also this house represents a way of life as old as man's first need of shelter. It is a Latin, European (my Scotch ancestors lived in a close), Chinese, a Japanese way of life; it is almost universal in that it offers the family its place of retirement into privacy. It offers man his intimate relation to the land, easing off the tension of urban life. This patio type of architecture offers a family the opportunity for individual life. It can be a peon type or it can be enriched to meet the highest type of culture. Here we have a very elaborate house. Recently in Mexico I saw the same thing in many Indian patios in the Tuluco Valley.

In this paper there has been a criticism sharp in intent of the thinking of Corbusier. My complaint is not with him, for whom I have a great admiration, but with those blind emulators who bring

monotony to the world. He exemplifies to me this quotation from another leader in French thinking—Remey de Gourmont: "The sole excuse which a man can have for writing is to write down himself, to unveil for others the sort of world which mirrors itself in his individual glass. His only excuse is to be original; he should say things not yet said and say them in a form not yet formulated; he should create his own esthetics and we should admit as many esthetics as there are original minds, and judge them for what they are and not for what they are not."

I come finally to the end by restating that our job as architects is to understand the needs of man, our client; not only his physical but, in growing importance, his mental and spiritual needs, so we can save him from himself, from sterility, and from frustration. Our job is to help create a culture which enhances the status of the individual and which eliminates insane asylums rather than increases them.

Books & Bulletins

BUILDING CODE REQUIREMENTS
FOR NEW DWELLING CON-
STRUCTION. Recommended by

the NHA and prepared in consultation with the National Bureau of Standards. Building

JOURNAL OF THE A. I. A.

Materials and Structures Report BMS107 (superseding BMS-88). 99 pp. 8" x 10 $\frac{1}{4}$ ". Washington: 1947: U. S. Dept. of Commerce. 20c (from Supt. of Documents, Washington 25, D. C.).

NHA's views on what constitutes reasonable building code requirements for dwellings soundly constructed without excessive cost, and with provision for recognizing new developments as they occur.

ARCHITECTURE—AN ART FOR ALL MEN. By Talbot Hamlin. 302 pp. 6" x 9 $\frac{1}{4}$ ". New York: 1947: Columbia University Press. \$3.50.

A particularly fitting gift for the layman who yearns to know something more about architecture than the names and characteristics of a few historical styles.

BRITISH ARCHITECTS AND CRAFTSMEN. By Sacheverell Sitwell. 204 pp. 5 $\frac{3}{4}$ " x 8 $\frac{3}{4}$ ". London and New York: 1946: B. T. Batsford, Ltd., and Charles Scribner's Sons. \$6.

For those who still may have a desire to turn back for "A Survey of Taste, Design and Style during Three Centuries—1600 to 1830."

YOUR CITY TOMORROW. By Guy Greer. 224 pp. 5 $\frac{1}{4}$ " x 8". New York: 1947: The Macmillan Co. \$2.50.

Community and city planning intelligently interpreted for the layman.

PARKING MANUAL. Compiled by Traffic Engineering and Safety Department, American Automobile Association. 190 pp. 6" x 9". Washington: 1946: American Automobile Assoc. \$1.

A timely assembling of opinion and experience, chiefly in off-street facilities, with emphasis on the problem of central business districts.

NOTES ON ARCHITECTURAL PRACTICE. By C. H. Cowgill. 190 pp. 8 $\frac{1}{4}$ " x 11". Blacksburg, Va.; 1947: The College Book Store. \$3. plus postage.

The author is Head of the Department of Architecture, Virginia Polytechnic Institute. Addressed to the student and others contemplating preparation for practice, here are lectures given in the second and fourth years of the architecture and architectural engineering course at Virginia Polytech.

WHEN THE CATHEDRALS WERE WHITE. By Le Corbusier. Translated from the French by Francis E. Hyslop, Jr. 240 pp. 5 $\frac{1}{2}$ " x 8". New York: 1947: Reynal & Hitchcock, Inc. \$3.

Comment on many things, including impressions of the U.S.A.

AIRPORT PLANNING. By Charles Froesch and Walther Prokosch. 262 pp. 8 $\frac{1}{4}$ " x 11". New York: 1946: John Wiley & Sons, Inc. \$7.

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ly, of Eastern Air Lines, Inc.

AIRPORT BUILDINGS. A Digest by
the Civil Aeronautics Adminis-
tration. 90 pp. 5½" x 8¾".
Washington: 1946: For sale by
the Superintendent of Docu-
ments, U. S. Gov't. Printing
Office. 20c.

Technical information, with il-
lustrations, as correlated from the
experience and opinions of many
branches of air transportation per-
sonnel, architects, engineers, Post
Office, Customs and Immigration
Service officials.

HOUSING GOALS FOR CHICAGO.

By the Chicago Plan Commis-
sion. 256 pp. 8½" x 11". Chi-
cago: 1946: Chicago Plan Com-
mission. \$1.50 (from the Mu-

nicipal Reference Library, City
Hall, Chicago).

Factual data, conclusions and
recommendations based on several
years' study, and leading to the
implementation of the program for
developing Chicago as 59 com-
munity areas.

**THE VERTICAL VANISHING POINT
IN LINEAR PERSPECTIVE.** By
Stanley Brampton Parker. 48
pp. 7" x 9". Cambridge, Mass.,
and London: 1047: Harvard
University Press. \$2.

Correcting one of our most com-
mon yet inexplicable conventions,
the assumption that the horizon
line always lies in the picture plane
and that all verticals are parallel—
even in a bird's-eye view. This
little volume is a "must" for any-
one who would know perspective
delineation.



Architects Read and Write

*Letters from readers—discussion, argu-
mentative, corrective, even vituperative.*



"IS THE PUBLIC INTERESTED"

By CLIFFORD F. HART, New York

E. B. Morris seems to have
conducted a one-man Gallup
Poll, using an inconclusive testing
method upon an inadequate sampl-
ing of the population, proceeding
without controls and without ap-
parent knowledge of Standard Er-
ror, Probable Error, Standard Dev-
iation, Kurtosis and all those little
techniques which make possible the

practice of statistics. His perform-
ance might appear meritorious—
just as a statistician's design for a
public edifice might be deemed ac-
ceptable if he worked without
knowledge, squares, scale or suit-
able lighting.

Questioning several architects
about the survey, I received the un-

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varying reply that the observations did not prove anything. I can not entirely agree with their summary dismissal of this quasi-scientific project. Does it not indicate that 1,870 inhabitants of the Eastern part of the United States are able to keep their heads down on a city street—only two glancing up—while the proportion would be reversed should the 1,870 be observed on the first tee?

And then there is the matter of elementary mathematics! The author says "The count stood at two out of 1,870, about a thousandth of one percent." Unless some merciless pedagogue took unfair advantage of my ten-year-old innocence, unless I have been laboring under a misapprehension all these years, this should read "one-tenth of one percent."

Perhaps we should consider just how *reliable* 1,870 observations may be considered. While the author has not made tests accurate enough to permit slight variations in the scoring of each individual, while there is no possibility of tabulating results in *continuous series* or arriving at a distribution curve, it would be quite reasonable to assume that the results are not more reliable than the *reliability of the mean* would be in the analysis of distribution in a continuous series. And the rule, accepted mathematically as well as experimentally, is: The reliability of an obtained mean will increase, not in proportion to the number of measures

upon which it is based, but in proportion to the *square root* of the number of measures. Thus, the result of 36 observations, compared with 1,870 observations, could be compared by dividing the square root of 36 into the square root of 1,870. Forty-three divided by 6 gives us 7-plus. If Mr. Morris will admit that thirty-six observations would have been insignificant, he will scarcely claim that a result only about seven times as reliable has any tremendous significance.

Casual readers of the article will not elect to make a careful dissection of the figures. Indeed, some of them will accept—without analysis—that "one-thousandth of one percent" statement. But even these read-and-run members of the profession will question the apparent lack of discrimination used in selecting the "sample." How many of those observed were capable of an interest in economics, in literature, in music, in art, in history or philosophy? On the other hand, it would be interesting to know the proportion of these guinea pigs distracted by matters of personal import. How many were concerned with a love affair, with economic insecurity, with finding an apartment or with recalling an elusive telephone number?

I must arrive at the conclusion that this article fails to prove lack of interest in architecture. The people who discuss international policies, finance, plays, golf, education, bridge, architecture—well,

they will always be outnumbered by the group who eagerly await the first edition of the morning tabloid, who follow the comic-strip sequence so avidly. My studies in the classical languages never

provided proof that ancient Greece and Rome differed so greatly from modern populations in this respect. Ancient history provides numerous examples indicative of a popular interest in "bread and circuses."

The Editor's Asides

AS THE INSTITUTE steadily increases the miscellaneous services it renders its members, the opportunities for such services likewise steadily increase. For instance, in the matter of biographical records. Somewhere, surely, in this country there should be a continuing record of architectural achievement, indexed by location of buildings and also by authorship. In how many of our cities is one able to find easily who it was that designed the courthouse, hospital, library or city hall that is an object of local pride? Credit for authorship may be known among a few contemporaries of the architects, but not for long. It would seem that here is a task for the chapters, in so far as gathering the information, but chapter officers and committees change rapidly, and their records disappear, or are destroyed by succeeding officials who are more concerned with the problems of what the chapter should do to encourage

attendance at its meetings. If The Institute should undertake the collecting and permanent possession of these records, are the chapters sufficiently interested to do their part? Is the job really worth doing, and if so how? What do *you* think?

ROBERT D. KOHN, Past-President of The Institute, has been replacing in Macy's store, New York City, a number of escalators, of which three were the first ever built—1902 models.

IT HAS BEEN SUGGESTED that The Institute might print the new Principles of Practice on a single sheet, suitable for framing. Some of us have rather too many framed documents in our offices—membership and registration certificates; other architects may crave more of this type of wall furnishing. Suggestions as to who would buy an attractively printed document will

be welcomed as an aid in determining whether the special printing would be worth while.

EVERY ONCE IN A WHILE someone tackles the job of writing a little pamphlet in an effort to acquaint the layman and prospective client with the functions of the architect. It is not an easy task to prepare such a brochure, largely for the reason that the architect does not always frame his message in the language of the layman. An exception to this is a little eight-page pamphlet called "May I Introduce Myself?" E. B. VanKeuren wrote it, in connection with the efforts of the Birmingham architects to cooperate in a recent home show in that city. It is an excellent job, and might well serve other architectural organizations who occasionally face this problem of making themselves known. Copies of the leaflet have graciously been made available from Nelson Smith, Secretary, Birmingham Architectural Club, Frank Nelson Building, Birmingham 3, Alabama.

BEN H. DYER, an associate of the firm of Faulkner, Kingsbury & Stenhouse, Washington, D. C., is wondering why someone has not developed and published an ac-

counting system for architectural offices. Not the sort that one has to engage a certified public accountant to keep it in shape, but a system adapted to the limited personnel of the small or moderate-size office. The Institute's Board of Directors reached this same conclusion several months ago, and has appointed a committee to look into the possibilities. Meanwhile, the ideal system may be in effect somewhere; is there any architect who is convinced he has it?

THE JAMESTOWN DRAMA, which we announced in the June issue as beginning July 17th and extending throughout the summer and fall of this year, will end for the season on September 14th. It is planned not as a 1947 event alone, but will be continued in the summers to come.

THE PHOTOGRAPHS OF BRIDGES by Robert Maillart, published in the July JOURNAL, came from the Museum of Modern Art, New York, and should have been so credited. The Museum now has an exhibition of Maillart's work on view, which will be there until October 12th. It will then start traveling to other museums in this country.

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